What is claimed is:

1. A method for checking the tightness of a vessel including a tank system and a tank venting system of a motor vehicle having an internal combustion engine, the method comprising the steps of:

blocking any supply to and discharge from said vessel;

applying an overpressure or underpressure relative to atmospheric pressure to said vessel;

detecting a signal which characterizes a gas mass flow required for this purpose;

controlling said gas mass flow in order to obtain a constant overpressure or underpressure; and,

when a gas mass flow, which is constant in average, adjusts, drawing a conclusion as to the presence of a leakage when said gas mass flow is greater than a pregiven limit value.

2. The method of claim 1, wherein said limit value is pregiven in dependence upon the elasticity of said vessel and/or a residual condensation of at least a component of a gas mixture in said vessel.

3. The method of claim 1, wherein the magnitude of said leakage is computed from said signal characterizing the constant gas mass flow.

4. The method of claim 1, wherein the pumping capacity of a pressure source is changed to control said gas mass flow; and, a quantity, which characterizes said pumping capacity, is detected as said signal characterizing said gas mass flow.

5. The method of claim 4, wherein an actuating quantity for driving said pressure source is computed in dependence upon a pressure signal; and, the magnitude of said leakage is determined from said actuating quantity.

6. The method of claim 1, wherein the through-flow quantity through a venting valve is controlled for charging said vessel with said underpressure; and, the quantity characterizing said through-flow quantity is determined as said signal characterizing said gas mass flow.

7. The method of claim 6, wherein said venting valve is a tank venting valve.

8. The method of claim 6, wherein an actuating quantity for driving said venting valve is computed in dependence upon a pressure signal and the magnitude of said leakage is determined from said actuating quantity.

9. An arrangement for checking the tightness of a vessel including a tank system and tank venting system of a motor vehicle having an internal combustion engine, the arrangement comprising:

a check valve for blocking a supply to and a discharge from said vessel;

a pressure source for applying a pregiven overpressure or underpressure to said vessel relative to atmospheric pressure;

means for controlling said pressure source to hold a pregiven overpressure or underpressure constant in average;

said control means including means for applying an

actuating quantity to said pressure source for controlling said pressure source; and,

means for computing the size of said leakage from said actuating quantity.

10. The arrangement of claim 9, wherein said control means includes a control unit for controlling said pressure source.

11. The arrangement of claim 10, wherein said control unit is an engine control apparatus.

12. The arrangement of claim 9, wherein said pressure source is an electromagnetically operated pump having a pump current which is said actuating quantity.

13. The arrangement of claim 7, wherein said pressure source is a venting valve having a passthrough which is controllable for controlling said underpressure.

14. The arrangement of claim 13, wherein said venting valve is a tank venting valve.